



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/806,107

03/23/2004

Yong-Jin Ahn

1293.1278C2

1886

49455

7590

08/30/2005

STEIN, MCEWEN & BUI, LLP
1400 EYE STREET, NW
SUITE 300
WASHINGTON, DC 20005

EXAMINER

CHOW, LIXI

ART UNIT

PAPER NUMBER

2652

DATE MAILED: 08/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/806,107

Applicant(s)

AHN ET AL.

Examiner

Lixi Chow

Art Unit

2652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/1/05 & 7/21/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____:
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claim 1 and 4 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, 4, and 5 of copending Application No. 10/806318. Although the conflicting claims are not identical, they are not patentably distinct from each other because both set of claims contain recording of recording pattern having multi-pulse and recording of erase pattern having multi-pulse. In claim 1 of the instant Application recites "a recording waveform generating unit which generates a recording waveform having an erase pattern containing a multi-pulse and a recording pattern containing another multi-pulse"; this limitation would corresponds to "a recording waveform generating unit generating a recording waveform which includes a first multi-pulse having a plurality of first pulse to form the recording pattern in response to the first level of the input data and second multi-pulse having a plurality of second pulse to form the erase pattern in response to the second level of the input data", as recited in claim 1 of Application No. 10/806318. The apparatus as claimed in claim 1 of Application No. 10/806318 would obviously include the pickup unit, because the apparatus is performing recording and/or erasing of patterns on the optical recording

medium. Furthermore, the pickup unit which generate light as recited in claim 1 of instant Application would correspond to the pickup unit recited in claim 4 of Application No. 10/606318.

In regards to claim 4 of instant Application, the limitation of “a recoding waveform generating unit which generates a recording waveform comprising the recording pattern, an erase pattern having a multi-pulse, and a cooling pulse concatenating the recording and erase patterns” is essentially the same as the limitation of “recording waveform generating unit generating a recording waveform which comprises the recording pattern corresponding to the first level of the input data, the erase pattern having a multi-pulse corresponding to the second level of the input data, and a cooling pulse concatenating the recording and erase patterns” as recited in claim 5 of Application No. 10/806318. The apparatus as claimed in claim 5 of Application No. 10/806318 would obviously include the pickup unit, because the apparatus is performing recording and/or erasing of patterns on the optical recording medium. The pickup unit which records mark and/or space as recited in claim 4 of instant Application would correspond to the pickup unit recited in claim 4 of Application No. 10/606318. Furthermore, the cooling pulse as recited in claim 4 corresponds to the cooling pulse claimed in claim 2 of Application No. 10/806318.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

3. Claims 2 and 3 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, 4, and 5 of copending Application No. 10/806318 in view of Ichihara.

In regards to claim 2 of instant Application, claims 1 or 4 of Application No. 10/806318 do not disclose a channel modulation unit which channel modulates data; however, Ichihara discloses an optical recording apparatus comprising a channel modulation unit which generates data provided from an outside source, and output an NRZI data signal to the recording waveform generating unit (see Fig. 5, element 25; and Figs. 1A and 1B show the NRZI waveform and recording waveform, respectively).

It would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to have channel modulation unit for modulating the data provided from the outside source in the apparatus disclosed in the Application No. 10/806318. On of ordinary skill in the art would have been motivated to modulate the data input from the outside source, because conversion of recording data into a predetermined row of code bit is processed by modulation unit (see Col. 10, lines 39-45). Hence, modulation unit would be needed in order to correctly record information on the optical recording medium.

In regards to claim 3 of instant Application, claims 1 or 4 of Application No. 10/806318 do not, but Ichihara discloses an apparatus for recording information on the optical recording medium, wherein the pickup unit comprises:

- a motor which rotates the optical recording medium (see Fig. 5, element 12);

- an optical head having a laser device which generates a laser beam to the optical recording medium or receives the laser beam reflected from the optical recording medium (Fig. 5, element 13);

- a servo circuit which servo-controls the motor and the optical head (Fig. 5, element 24 and/or 22; and Col. 10, lines 25-38); and

a laser driving circuit which drives the laser device installed in the optical head (Fig. 5, element 25).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to include the above components shown in Fig. 5 of Ichihara into the optical pickup unit disclosed by Application No. 10/806318. One of ordinary skill in the art would have been motivated to do this, because every component contained in the optical pickup, listed above, are crucial for carrying out recording and/or reproducing of information to and/or from an optical recording medium (see Col. 10, lines 25-64).

This is a provisional obviousness-type double patenting rejection.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Ichihara (US 6,396,792).

Referring to claim 1:

Ichihara discloses an apparatus for recording data on an optical recording medium (see Fig. 5), comprising:

a recording waveform generating unit which generates a recording waveform having an erase pattern containing a multi-pulse and a recording pattern containing another multi-pulse (see Figs. 1A and 1B) ; and

a pickup unit which generates light to the optical recording medium according to the generated recording waveform so that a mark or a space is formed on the optical recording medium (see Fig. 5 and Col. 3, lines 5-17).

Referring to claim 2:

Ichihara discloses an apparatus as in claim 1, further comprising:

a channel modulation unit which channel modulates data provided from an outside source, and outputs an NRZI data signal to the recording waveform generating unit (see Fig. 5 and Col. 10, lines 39-45; element 26 corresponds to the channel modulation unit, and element 26 would obviously include the recording waveform generating unit since Figs. 1A and 1B show the NRZI signal are to be recorded on the optical recording medium).

Referring to claim 3:

Ichihara disclose an apparatus as in claim 1, wherein the pickup unit comprises:

a motor which rotates the optical recording medium (see Fig. 5, element 12);

an optical head having a laser device which generates a laser beam to the optical recording medium or receives the laser beam reflected from the optical recording medium (Fig. 5, element 13);

a servo circuit which servo-controls the motor and the optical head (Fig. 5, element 24 and/or 22; and Col. 10, lines 25-38); and

a laser driving circuit which drives the laser device installed in the optical head (Fig. 5, element 25).

Referring to claim 4:

Ichihara discloses an apparatus for recording data on an information storage medium (Fig. 5), comprising:

a recording waveform generating unit which generates a recording waveform comprising a recording pattern, an erase pattern having a multi-pulse, and a cooling pulse concatenating the recording and erase pattern (see Figs. 1A-1B and Col. 11, lines 8-15; the modulation circuit 26 generates the waveform as shown in Fig. 1B; also see Col. 6, lines 35-45; the pulse between the recording pattern and the erase pattern corresponds to the cooling pattern, which concatenating the recording and the erasing patterns); and

a pickup unit which records with respect to the information storage medium according to the generated recording waveform so as to form a mark and/or a space on the information storage medium (see Col. 2, lines 53-65).

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dekker is cited, because Dekker shows an optical recording medium capable of recording multi pulse erase pattern on a recording medium.

Nakamura et al. is cited, because Nakamura et al. teach a method of recording erase pattern having multi-pulse.


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lixi Chow whose telephone number is 571-272-7571. The examiner can normally be reached on Mon-Fri, 8:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2652

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LC 8/1/05


HOA T. NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600
8/8/05